Application No.: 10/019,783 Docket No.: SAE-0005

AMENDMENTS TO THE CLAIMS, COMPLETE LISTING OF CLAIMS IN ASCENDING ORDER WITH STATUS INDICATOR

Please amend the following claims as indicated.

1. (Currently Amended) A method for producing a transgenic gramineae having iron deficiency resistance, comprising transforming a gramineae with a polynucleotide that codes an enzyme in the biosynthetic pathway of mugineic acids, said polynucleotide comprising (1) the base sequence of SEQ ID NO. 3, or (2) a base sequence complementary to said base sequence of SEQ ID NO. 3 by using a vector pIG121Hm or pBIGRZ, wherein the polynucleotide is selected from the group consisting of

- (A) a polynucleotide encoding an amino acid sequence of SEQ ID NO: 1,
- (B) a polynucleotide encoding an amino acid sequence of SEQ ID NO: 2,
- (C) a polynucleotide which encodes an enzyme exhibiting nicotianamine amino transferase (NAAT) activity and can hybridize with polynucleotide (A) or (B) under stringent conditions of a hybridization buffer comprising 6 x SSPE, 5 x Denhart solution, 0.1% SDS, and 100 mg/ml altered salmon spermary DNA, and a hybridization temperature of 65 degrees, and (D) a polynucleotide comprising the base sequence of SEQ ID NO. 3.
 - 2. (Canceled).
- 3. (Previously Presented) The method in accordance with claim 1, wherein the polynucleotide further comprises a promoter, said promoter being CaMV35S.
 - 4. (Canceled).
- 5. (Previously Presented) The method in accordance with claim 1, wherein the polynucleotide is a barley *naat* gene.
 - 6. (Canceled).

Application No.: 10/019,783 Docket No.: SAE-0005

7. (Currently Amended) A transgenic gramineae with iron deficiency resistance comprising a polynucleotide that codes an enzyme in the biosynthetic pathway of mugineic acids, said polynucleotide comprising (1) the base sequence of SEQ ID NO. 3, or (2) a base sequence complementary to said base sequence of SEQ ID NO. 3 produced through the method in accordance with any one of claims 1 to 3 and 5.

- 8. (Currently Amended) A seed of the transgenic gramineae in accordance with claim 7, wherein the seed comprises a polynucleotide that codes an enzyme in the biosynthetic pathway of mugineic acids, said polynucleotide comprising (1) the base sequence of SEQ ID NO. 3, or (2) a base sequence complementary to said base sequence of SEQ ID NO. 3-selected from the group consisting of
 - (A) a polynucleotide encoding an amino acid sequence of SEQ ID NO: 1,
 - (B) a polynucleotide encoding an amino acid sequence of SEQ ID NO: 2,
- (C) a polynucleotide which encodes an enzyme exhibiting nicotianamine amino transferase (NAAT) activity and can hybridize with polynucleotide (A) or (B) under stringent conditions of a hybridization buffer comprising 6 x SSPE, 5 x Denhart solution, 0.1% SDS, and 100 mg/ml altered salmon spermary DNA, and a hybridization temperature of 65 degrees, and (D) a polynucleotide comprising the base sequence of SEO ID NO. 3.
- 9. (Currently Amended) A cell of the transgenic gramineae in accordance with claim 7, wherein the cell comprises a polynucleotide that codes an enzyme in the biosynthetic pathway of mugineic acids, said polynucleotide comprising (1) the base sequence of SEQ ID NO. 3, or (2) a base sequence complementary to said base sequence of SEQ ID NO. 3-selected from the group consisting of
 - (A) a polynucleotide encoding an amino acid sequence of SEQ ID NO: 1,
 - (B) a polynucleotide encoding an amino acid sequence of SEQ ID NO: 2,
- (C) a polynucleotide which encodes an enzyme exhibiting nicotianamine amino transferase (NAAT) activity and can hybridize with polynucleotide (A) or (B) under stringent conditions of a hybridization buffer comprising 6 x SSPE, 5 x Denhart solution, 0.1% SDS, and 100 mg/ml altered salmon spermary DNA, and a hybridization temperature of 65 degrees, and

(D) a polynucleotide comprising the base sequence of SEQ ID NO. 3.

Application No.: 10/019,783 Docket No.: SAE-0005

10. (Previously Presented) A method of growing gramineae in an iron deficient field comprising planting the transgenic gramineae of claim 7, or seeds thereof in said field under conditions to promote growth of said gramineae.

- 11. (Original) A crop of gramineae obtained through the method in accordance with claim 10.
- 12. (Previously Presented) The transgenic gramineae in accordance with claim 7, wherein the polynucleotide is a barley *naat* gene.
- 13. (New) The method in accordance with claim 1, wherein the enzyme is nicotianamine amino transferase (NAAT) and the polynucleotide that codes for said enzyme is a *naat* gene.
- 14. (New) The transgenic gramineae in accordance with claim 7, wherein the enzyme is nicotianamine amino transferase (NAAT) and the polynucleotide that codes for said enzyme is a *naat* gene.